

STATE FIRE PREVENTION COMMISSION

LIVE FIRE TRAINING REGULATIONS

CHAPTER 1 INTRODUCTION

1.1 SCOPE. This regulation deals with the establishment of procedures for training of fire suppression personnel engaged in structural fire fighting operations under live fire training. Effective July 1, 1995.

1.2 PURPOSE. This regulation deals with the training of structural fire fighting under live fire conditions and focuses on training for coordinated interior fire suppression operations with a minimum exposure to risk for the participants.

1.3 GENERAL. Live fire training in a training center burn building or in a suitable acquired building awaiting demolition is an excellent means of training fire fighters. While this type of training provides high levels of realism, it obviously carries with it most of the hazards of interior fire fighting at an actual emergency. Live fire training evolutions must be planned with great care and supervised closely by instructional personnel. The information contained in this regulation is designed to ensure adequate levels of safety while allowing the local organization some flexibility to utilize independent judgement based on local situations and the level of training to be accomplished.

1.4 DEFINITIONS. Unless expressly stated elsewhere, the following terms shall, for the purposes of this regulation, have the meanings indicated below.

Acquired Building. A structure acquired by the authority having jurisdiction from a property owner for the purpose of conducting live fire training evolutions.

Authority Having Jurisdiction. The "authority having jurisdiction" for the purpose of live fire training is the fire chief.

Demonstration. A practical showing by example of how a principle or method is applied.

Instructor. An individual designated by the authority having jurisdiction to deliver structural fire fighting training; who has the training and experience to supervise students during live fire training evolutions in structures.

Officer-in-Charge. An individual designated by the authority having jurisdiction to be in charge of the live fire training evolution.

Live Fire. Any unconfined open flame or device that can propagate fire to the building or other combustible materials.

Participant. Any student, instructor, safety officer, visitor, or person who is involved in the live fire training evolution within the operations area.

Safety Officer. An individual designated by the authority having jurisdiction to maintain a safe working environment at all live fire training evolutions.

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Student. Any person who is present at the live fire training evolution for the purpose of receiving training.

CHAPTER 2 STUDENT PREREQUISITES

2-1 MINIMUM TRAINING. In order to ensure safe operations during a live fire training exercise, all participating personnel shall meet a minimum level of basic training as required by the authority having jurisdiction.

2-1.2 Requirements of a minimum basic training for students, crew leaders, instructors, safety officers, and officers in charge participating in live fire training shall be determined by the authority having jurisdiction.

CHAPTER 3 STRUCTURES

3-1 GENERAL. Strict safety practices shall be applied to all structures selected for live fire training evolutions. These practices will vary greatly in the degree of application when comparing burn building structures to acquired structures. By their nature, burn buildings have been designed specifically for the purpose of repeated live fire training evolutions and include safeguards that only become unacceptably hazardous through misuse or improper maintenance. Acquired structures, on the other hand, were never designed or intended for burn applications and through disrepair

may lack even fundamental elements of fire resistance.

3-2 PROCUREMENT OF ACQUIRED BUILDINGS

3-2.1 Any building that is considered for a structural fire training shall be properly prepared for the live fire training. Preparation will include following the Delaware Fire Prevention Commission Burn Regulations.

3-3 PREPARATION OF ACQUIRED BUILDINGS

3-3.1 In preparation for live fire training, an inspection of the structure shall be made to determine that the floors, walls, stairs, and other structural components are capable of withstanding the weight of content, participants, and accumulated water.

3-3.2 Removal or neutralization of all hazardous storage and conditions within the structure shall be accomplished. Closed containers and highly combustible materials shall be removed. Oil tanks and similar closed vessels that cannot easily be removed shall be vented sufficiently to eliminate an explosion or overpressure rupture, and have any hazardous or combustible atmosphere within the tank or other vessel shall be rendered inert. Hazards potentially dangerous to participants such as floor openings, missing stair treads and rails, and other such hazards shall be repaired or made inaccessible.

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3-3.3 In order to secure optimum participant personal safety from unforeseen environmental hazards, a careful examination of the building or structure shall be conducted to determine that the following items have been addressed, if applicable, to the specific evolution.

(a) floors, railings, and stairs shall be made safe;

(b) special attention shall be given to potential chimney hazards;

(c) debris creating or contributing to unsafe conditions shall be removed;

(d) extraordinary weight above the training area shall be removed or the area below it shall be rendered inaccessible;

(e) adequate ventilation opening(s) shall be made in the roof;

(f) utilities shall be disconnected;

(g) all forms of asbestos deemed hazardous to personnel shall be removed.

3-3.4 Roof ventilation openings that are normally closed but can be opened in the event of emergency may be utilized. These may consist of panels or hinged covers.

3-3.5 Buildings that cannot be made safe as required by section 3-3 shall not be utilized for interior live fire training evolutions.

3-4 EXPOSURES

3-4.1 Adjacent building or property that might become involved shall be properly protected in accordance with the Delaware Fire Prevention Commission Burn Regulations.

3-4.2 Utility service adjacent to the building shall be removed or protected.

3-4.3 Property adjacent to the building that could be affected by the smoke from the building, such as railroads, airports, or heliports; nursing homes, hospitals, or other similar facilities shall be identified and the person-in-charge informed about the date and time of the live fire training evolution.

3-4.4 Streets or highways in the vicinity of the building shall be surveyed for potential effects from live fire training evolutions. Appropriate safeguards shall be taken to eliminate any possible hazard to motorists. Such safeguards may include street closing, traffic rerouting, signs, and police traffic control.

3-4.5 Pedestrian traffic in the vicinity of the building shall be kept clear of the operations area of the live burn. Fire lines shall be established for this purpose.

3-5 WATER SUPPLY

3-5.1 The water supply for any individual live fire training evolution shall be assessed based on the extent of the evolutions, size

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and structure of the building and contents to be involved, method of attack to be employed, protection of exposures, and reserves for unexpected problems.

3-5.2 Separate sources shall be utilized for supply of attack lines and backup lines in order to preclude the loss of both water supply sources at the same time.

3-6 VEHICLE PARKING/STAGING

3-6.1 Adequate areas for staging, operating, and parking of the fire apparatus that will be used in the live fire training evolution shall be designated.

3-6.2 An area shall be designated to park fire apparatus and vehicles that are not a part of the evolution so as to not interfere with fire ground operations. Consideration shall be given to locating this area for prompt response of apparatus in the event of an emergency.

3-6.3 If required or necessary, parking areas for police vehicles or for the press shall be designated.

3-6.4 A parking area for an ambulance or emergency medical service vehicle shall be designated. Consideration shall be given to locating this area for prompt response in the event of a personal injury to participants in the evolution.

3-6.5 Consideration shall be given to the designation and layout of ingress-egress routes in order to

assure their availability in the event of an emergency.

3-7 PREBURN BRIEFING SESSION

3-7.1 Prior to conducting actual live fire training evolutions in the building, a preburn briefing session shall be conducted for all participants. All facets of all evolution to be conducted shall be discussed and assignments shall be made for all crews participating in the training session. The location of simulated victims(see 5-2.10) need not be disclosed, provided that the possibility of victims is discussed in the preburn briefing.

3-7.2 Prior to conducting any live fire training in the structure, all participants shall have a knowledge and familiarity with the layout of the building in order to facilitate necessary evacuation of the building. Prior to conducting any live fire training in the structure, all participants of the evolution shall be required to have a walk-through of the structure.

3-7.3 A building evacuation plan shall be established and an evacuation signal shall be demonstrated to all participants prior to the live fire training evolution.

3-8 SPECTATOR SAFETY

3-8.1 All spectators shall be restricted to an area outside the operations area perimeter established by the fire chief or his designee.

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3-8.2 Visitors allowed to observe operations and allowed within the perimeter shall be escorted at all times.

CHAPTER 4 FUEL MATERIALS

4-1 MATERIAL TYPES

4-1.1 The fuels that are utilized in live fire training evolutions shall have known burning characteristics of such a nature to be as controllable as possible. Unidentified materials, such as debris found in or around the structure which may burn in an unanticipated way, react violently, or create environmental or health hazards, shall not be used.

4-1.2 Class A materials shall be used in only the amounts necessary to create the desired fire size.

Exception: Pressure treated wood, rubber, and plastic materials shall not be used.

4.2 FIRE GROWTH

4-2.1 The officer-in-charge shall assess the selected fire room environment for factors that will affect the growth, development, and spread of fire.

CHAPTER 5 SAFETY

5.1 SAFETY OFFICER/DESIGNEE

5-1.1 A safety officer shall be appointed by the authority having

jurisdiction for all live fire training evolutions.

5-1.2 The safety officer shall have the authority, regardless of rank, to intervene and control any aspect of the operations when, in his or her judgement, a potential or real danger, accident, or unsafe condition exists.

5-1.3 Responsibilities of the safety officer shall include but not be limited to:

(A) prevention of unsafe acts

(B) elimination of unsafe conditions

5-1.4 The safety officer shall provide for the safety of all persons on the scene including students, instructors, visitors, and spectators.

5-1.5 The safety officer shall not be assigned other duties that interfere with safety responsibilities.

5-1.6 If the safety officer notices any unsafe act or condition occur, he/she shall report it to the officer-in-charge as soon as possible.

5-2 OTHER SAFETY REQUIREMENTS

5-2.1 Sufficient backup lines shall be provided to ensure adequate protection for personnel on training attack lines.

5-2.2 The officer-in-charge of the live fire training evolutions shall

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determine, prior to each specific evolution, how many training attack lines and backup fire lines will be necessary. The officer-in-charge shall then:

(A) assign a crew leader to each line, and will not exceed 5 students

(B) assign sufficient additional personnel to "backup lines" to provide mobility

5-2.3 Additional safety personnel, as deemed necessary by the officer-in-charge, shall be strategically placed within the structure to react to any unplanned or threatening situation or condition.

5-2.4 A method of fireground communications shall be established to allow coordination among the incident commander, the interior and exterior sectors, the safety officer, and external requests for assistance.

5-2.5 Emergency medical services shall be available to handle any injuries. Written reports shall be made on all injuries and on all medical aid rendered.

5-2.6 One person shall be designated as the "ignition officer" to control the materials being burned. The ignition officer shall not be a student.

5-2.7 The ignition officer shall wear full protective clothing, including self-contained breathing apparatus (scba) as required in section 5-3, when performing this function.

5-2.8 The decision to ignite the training fire shall be made by the instructor-in-charge in coordination with the safety officer. No more than one fire shall be permitted within a building, except in training center burn buildings specifically designed for concurrent, multiple live fire training evolutions.

5-2.9 A thorough search of the structure shall be conducted to ensure that no unauthorized persons, animals, or objects are in the building immediately prior to ignition.

5-2.10 No person(s) shall be placed inside the building to play the role of a victim.

5-3 PROTECTIVE CLOTHING AND EQUIPMENT

5-3.1 Each participant shall wear full protective clothing and self-contained breathing apparatus (scba).

5-3.2 Prior to entry into a live fire training evolution, all protective gear shall meet requirements of the authority having jurisdiction.

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CHAPTER 6 OFFICER

6-1 GENERAL

6-1.1 The authority having jurisdiction shall designate an individual to deliver structural fire fighting training.

6-1.2 Other factors such as extreme temperatures, large groups, and long-duration classes shall be taken into consideration, and additional crew leaders shall be designated as deemed necessary to ensure proper levels of safety.

6-2 OFFICER RESPONSIBILITIES.

6-2.1 The officer-in-charge of the live fire training shall be responsible for full compliance with this regulation.

6-2.2 Crew leader shall make a head count both when entering and exiting the building during an actual attack evolution conducted in accordance with this regulation. Crew leader shall closely monitor and supervise all assigned students during the live fire training evolution.

CHAPTER 7 REPORTS AND RECORDS

7-1 GENERAL.

7-1.1 The authority having jurisdiction shall keep all necessary reports and records required.